THAT WHICH IS CLAIMED IS

1.   A data storage management system for managing a plurality of remotely located, independent data storage systems, comprising:

a central monitoring system located at a
5   geographical location different from a geographical location of each respective remotely located, independent data storage system, wherein the central monitoring system comprises a central data repository; and

a plurality of remote agent systems, wherein
10   each remote agent system communicates with a respective one of the remotely located data storage systems, wherein each remote agent system collects data from a respective remotely located data storage system, converts the collected data to a standardized format, and stores the
15   collected data in the central data repository.

2.   The data storage management system of Claim 1, wherein each remote agent system comprises pattern recognition logic that can identify data patterns
20   that precede fault conditions at a respective remotely located data storage system.

3.   The data storage management system of Claim 1, wherein each remote agent system consolidates
25   the collected data prior to storing the collected data in the central data repository.

4.   The data storage management system of Claim 1, wherein each remote agent system filters
30   collected data prior to communicating the collected data to the central monitoring system to reduce an amount of data communicated to the central monitoring system.

5.   The data storage management system of Claim 1, wherein each remote agent system comprises action logic that directs the remote agent system to perform one or more corrective actions at a respective remotely located data storage system in response to identifying a data pattern known to precede a fault condition.

6.   The data storage management system of Claim 1, wherein each remote agent system collects data and hardware information from a respective remotely located data storage system.

7.   The data storage management system of Claim 1, wherein each remote agent system comprises:

one or more element information managers (EIMs), wherein each EIM is configured to communicate with a respective data source at a remotely located data storage network and convert data from the data source to the standardized format;

one or more service information managers (SIMs), wherein each SIM is configured to communicate with EIMs associated with a common data application;

one or more platform information manager (PIMs), wherein each PIM is configured to communicate with SIMs associated with a common data application platform; and

an/activity director that is configured to communicate with each EIM, SIM and PIM and to instruct each EIM, SIM and PIM as to what information to collect and store.

8.   The data storage management system of Claim 1, wherein each remotely located data storage system comprises one or more data storage devices.

9. The data storage management system of Claim 8, wherein the one or more data storage devices comprise a plurality of heterogeneous data storage devices.

10. The data storage management system of Claim 1, wherein the central monitoring system is configured to communicate corrective action information to each respective remote agent system and wherein each remote agent system is configured to implement the corrective action in response thereto.

11. The data storage management system of Claim 1, wherein the central monitoring system is configured to communicate corrective action information to a third party for implementation.

12. The data storage management system of Claim 1, wherein the central monitoring system is configured to analyze information from each remote agent system and identify patterns known to precede data storage problems at a respective remotely located data storage system.

13. The data storage management system of Claim 1, further comprising a plurality of customer portals, each customer portal associated with a respective one of the remotely located data storage systems and with the central monitoring system, wherein each customer portal provides user access to information about a respective one of the remotely located data storage systems.

14. The data storage management system of Claim 13, wherein each customer portal allows user control and configuration of a remotely located data

-28-

storage system.

15. A data storage management system for managing a plurality of remotely located, independent data storage systems, comprising:

a central monitoring system located at a geographical location different from a geographical location of each respective remotely located, independent data storage system, wherein the central monitoring system comprises a central data repository; and

a plurality of remote agent systems, wherein each remote agent system communicates with a respective one of the remotely located data storage systems, wherein each remote agent system collects data from a respective remotely located data storage system, converts the collected data to a standardized format, and stores the collected data in the central data repository, wherein each remote agent system comprises pattern recognition logic that can identify data patterns that precede fault conditions at a respective remotely located data storage system, and wherein each remote agent system comprises action logic that directs the remote agent system to perform one or more corrective actions at a respective remotely located data storage system in response to identifying a data pattern known to precede a fault condition.

16. The data storage management system of Claim 15, wherein each remote agent system consolidates the collected data prior to storing the collected data in the central data repository.

17. The data storage management system of Claim 15, wherein each remote agent system filters collected data prior to communicating the collected data to the central monitoring system to reduce an amount of

data communicated to the central monitoring system.

18.   The data storage management system of Claim 15, wherein each remote agent system collects data and hardware information from a respective remotely located data storage system.

19.   The data storage management system of Claim 15, wherein each remote agent system comprises:
one or more element information managers (EIMs), wherein each EIM is configured to communicate with a respective data source at a remotely located data storage network and convert data from the data source to the standardized format;
one or more service information managers (SIMs), wherein each SIM is configured to communicate with EIMs associated with a common data application;
one or more platform information manager (PIMs), wherein each PIM is configured to communicate with SIMs associated with a common data application platform; and
an activity director that is configured to communicate with each EIM, SIM and PIM and to instruct each EIM, SIM and PIM as to what information to collect and store.

20.   The data storage management system of Claim 15, wherein each remotely located data storage system comprises one or more data storage devices.

21.   The data storage management system of Claim 20, wherein the one or more data storage devices comprise a plurality of heterogeneous data storage devices.

22.   The data storage management system of

Claim 15, wherein the central monitoring system is configured to communicate corrective action information to each respective remote agent system and wherein each remote agent system is configured to implement the corrective action in response thereto.

23. The data storage management system of Claim 15, wherein the central monitoring system is configured to communicate corrective action information to a third party for implementation.

24. The data storage management system of Claim 15, wherein the central monitoring system is configured to analyze information from each remote agent system and identify patterns known to precede data storage problems at a respective remotely located data storage system.

25. The data storage management system of Claim 15, further comprising a plurality of customer portals, each customer portal associated with a respective one of the remotely located data storage systems and with the central monitoring system, wherein each customer portal provides user access to information about a respective one of the remotely located data storage systems.

26. The data storage management system of Claim 25, wherein each customer portal allows user control and configuration of a remotely located data storage system.

27. A data storage management system for managing a plurality of remotely located, independent data storage systems, comprising:
a central monitoring system located at a

geographical location different from a geographical location of each respective remotely located, independent data storage system, wherein the central monitoring system comprises a central data repository;

5   a plurality of remote agent systems, wherein each remote agent system communicates with a respective one of the remotely located data storage systems, wherein each remote agent system collects data from a respective remotely located data storage system, converts the

10   collected data to a standardized format, and stores the collected data in the central data repository, wherein each remote agent system comprises:

        one or more element information managers (EIMs), wherein each EIM is configured to

15   communicate with a respective data source at a remotely located data storage network and convert data from the data source to the standardized format;

        one or more service information managers

20   (SIMs), wherein each SIM is configured to communicate with EIMs associated with a common data application;

        one or more platform information manager (PIMs), wherein each PIM is configured to

25   communicate with SIMs associated with a common data application platform; and

        an activity director that is configured to communicate with each EIM, SIM and PIM and to instruct each EIM, SIM and PIM as to what

30   information to collect and store; and

        a plurality of customer portals, each customer portal associated with a respective one of the remotely located data storage systems and with the central monitoring system, wherein each customer portal provides

35   user access to information about a respective one of the remotely located data storage systems.

28. The data storage management system of Claim 27, wherein each remote agent system comprises pattern recognition logic that can identify data patterns that precede fault conditions at a respective remotely located data storage system.

29. The data storage management system of Claim 27, wherein each remote agent system consolidates the collected data prior to storing the collected data in the central data repository.

30. The data storage management system of Claim 27, wherein each remote agent system filters collected data prior to communicating the collected data to the central monitoring system to reduce an amount of data communicated to the central monitoring system.

31. The data storage management system of Claim 27, wherein each remote agent system comprises action logic that directs the remote agent system to perform one or more corrective actions at a respective remotely located data storage system in response to identifying a data pattern known to precede a fault condition.

32. The data storage management system of Claim 27, wherein each remote agent system collects data and hardware information from a respective remotely located data storage system.

33. The data storage management system of Claim 27, wherein each remotely located data storage system comprises one or more data storage devices.

34. The data storage management system of

Claim 33, wherein the one or more data storage devices comprise a plurality of heterogeneous data storage devices.

5   35.   The data storage management system of Claim 27, wherein the central monitoring system is configured to communicate corrective action information to each respective remote agent system and wherein each remote agent system is configured to implement the
10   corrective action in response thereto.

              36.   The data storage management system of Claim 27, wherein the central monitoring system is configured to communicate corrective action information
15   to a third party for implementation.

              37.   The data storage management system of Claim 27, wherein the central monitoring system is configured to analyze information from each remote agent
20   system and identify patterns known to precede data storage problems at a respective remotely located data storage system.

              38.   The data storage management system of
25   Claim 27, wherein each customer portal allows user control and configuration of a remotely located data storage system.

              39.   A method of managing a remotely located,
30   independent data storage system, comprising:
              collecting data from a remotely located data storage system;
              converting the collected data to a standardized format;
35   storing the standardized format collected data in a data repository of a central monitoring system,

wherein the central monitoring system is located at a
geographical location different from a geographical
location of the remotely located data storage system; and
analyzing the collected data to identify data

5   patterns that precede fault conditions at the remotely
located data storage system.

40.   The method of Claim 39, further comprising
consolidating the collected data prior to storing the
10   collected data in the data repository.

41.   The method of Claim 40, wherein data is
collected, converted to a standardized format,
consolidated, and stored in a data repository of a
15   central monitoring system by an agent system that
communicates with the remotely located data storage
system.

42.   The method of Claim 39, wherein analyzing
20   the collected data to identify data patterns that precede
fault conditions at the remotely located data storage
system is performed at the central monitoring system.

43.   The method of Claim 41, wherein analyzing
25   the collected data to identify data patterns that precede
fault conditions at the remotely located data storage
system is performed by the agent system.

44.   The method of Claim 39, further comprising
30   communicating corrective action information to a third
party for implementation at the remotely located data
storage system in response to identifying data patterns
that precede fault conditions at the remotely located
data storage system.
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45.   The method of Claim 41, further comprising

communicating corrective action information to the remote agent system and wherein the remote agent system is configured to implement the corrective action in response thereto.

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46. The method of Claim 41, wherein the agent system filters collected data prior to communicating the collected data to the central monitoring system to reduce an amount of data communicated to the central monitoring
10 system.

47. The method of Claim 41, wherein the agent system comprises action logic that directs the agent system to perform one or more corrective actions at the
15 remotely located data storage system in response to identifying a data pattern known to precede a fault condition.

48. The method of Claim 41, wherein the agent
20 system collects data and storage hardware information from the remotely located data storage system.

49. The method of Claim 41, wherein the remote agent system comprises:
25 one or more element information managers (EIMs), wherein each EIM is configured to communicate with a respective data source at the remotely located data storage system and convert data from the data source to the standardized format;
30 one or more service information managers (SIMs), wherein each SIM is configured to communicate with EIMs associated with a common data application; one or more platform information manager (PIMs), wherein each PIM is configured to communicate
35 with SIMs associated with a common data application platform; and

an activity director that is configured to communicate with each EIM, SIM and PIM and to instruct each EIM, SIM and PIM as to what information to collect and store.

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50. A computer program product for managing a remotely located, independent data storage system, the computer program product comprising a computer usable storage medium having computer readable program code embodied in the medium, the computer readable program code comprising:

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computer readable program code that collects data from a remotely located data storage system;

computer readable program code that converts the collected data to a standardized format;

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computer readable program code that stores the standardized format collected data in a data repository of a central monitoring system, wherein the central monitoring system is located at a geographical location

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different from a geographical location of the remotely located data storage system; and

computer readable program code that analyzes the collected data to identify data patterns that precede fault conditions at the remotely located data storage

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system.

51. The computer program product of Claim 50, further comprising computer readable program code that consolidates the collected data prior to storing the

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collected data in the data repository.

52. The computer program product of Claim 51, wherein data is collected, converted to a standardized format, consolidated, and stored in a data repository of

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a central monitoring system by an agent system communicating with the remotely located data storage

system.

53. The computer program product of Claim 50, wherein computer readable program code that analyzes the collected data to identify data patterns that precede fault conditions at the remotely located data storage system executes at the central monitoring system.

54. The computer program product of Claim 52, wherein computer readable program code that analyzes the collected data to identify data patterns that precede fault conditions at the remotely located data storage system executes at the agent system.

55. The computer program product of Claim 50, further comprising computer readable program code that communicates corrective action information to a third party for implementation at the remotely located data storage system in response to identifying data patterns that precede fault conditions at the remotely located data storage system.

56. The computer program product of Claim 52, further comprising computer readable program code that communicates corrective action information to the remote agent system and wherein the remote agent system is configured to implement the corrective action in response thereto.

57. The computer program product of Claim 52, wherein the agent system comprises computer readable program code that filters collected data prior to communicating the collected data to the central monitoring system to reduce an amount of data communicated to the central monitoring system.

58. The computer program product of Claim 52, wherein the agent system comprises computer readable program code that directs the agent system to perform one or more corrective actions at the remotely located data storage system in response to identifying a data pattern known to precede a fault condition.

59. The computer program product of Claim 52, wherein the agent system computer readable program code that collects data and storage hardware information from the remotely located data storage system.

60. The computer program product of Claim 52, wherein computer readable program code at the remote agent system comprises:

one or more element information managers (EIMs), wherein each EIM is configured to communicate with a respective data source at the remotely located data storage system and convert data from the data source to the standardized format;

one or more service information managers (SIMs), wherein each SIM is configured to communicate with EIMs associated with a common data application;

one or more platform information manager (PIMs), wherein each PIM is configured to communicate with SIMs associated with a common data application platform; and

an activity director that is configured to communicate with each EIM, SIM and PIM and to instruct each EIM, SIM and PIM as to what information to collect and store.